

IN THE CLAIMS:

1. (currently amended) A method of performing service diagnostics on appliances, the method comprising:

connecting a diagnostic interface ~~to a local area appliance network interconnecting a plurality of appliances~~ to a plurality of appliances, each of the plurality of appliances in direct communication with the diagnostic interface via a power line carrier, wherein the diagnostic interface includes a display;

accessing at least one appliance ~~in the local area appliance network~~ of the plurality of appliances;

performing a service diagnosis of the at least one appliance through the diagnostic interface over the ~~local area appliance network~~ power line carrier using service functions in the at least one appliance;

implementing the diagnostic interface within a single device including ~~the~~ a display, ~~[[a]]~~ processing circuitry generating service commands to perform the service diagnosis, and a power line carrier modem configured to modulate data to communicate the data over ~~an alternating current (AC) power line~~ the power line carrier; and

servicing, by the diagnostic interface, the at least one appliance via the power line carrier ~~modem~~, said servicing comprising at least one of adjusting a characteristic of the at least one appliance and displaying to a technician the service diagnosis.

2. (canceled)

3. (previously presented) The method of claim 1 wherein accessing further comprises accessing a dedicated appliance controller in at least one appliance.

4. (previously presented) The method of claim 1 wherein the service functions comprise safety functions, parameter functions, and appliance status functions.

5. (previously presented) The method of claim 1 further comprising implementing said diagnostic interface in a computer.

6. (canceled)

7. (original) The method of claim 1 further comprising connecting to a remote system to retrieve service diagnostic information.

8. (previously presented) The method of claim 1 wherein performing service diagnosis includes diagnosing and servicing the at least one appliance based on the appliance diagnosis.

9. (previously presented) The method of claim 8 wherein servicing the at least one appliance comprises patching appliance firmware.

10. (previously presented) The method of claim 8 wherein servicing the at least one appliance comprises adjusting appliance parameters.

11. (previously presented) The method of claim 1 further comprising maintaining an external database of appliance information based on diagnosis of the at least one appliance.

12. (currently amended) A diagnostic interface for performing service diagnostics on appliances, the diagnostic interface comprising:

a display for viewing diagnostic and service information;

processing circuitry for generating service commands for an appliance; and

a power line carrier communication interface configured to be directly connected to a ~~local area appliance network interconnecting~~ a plurality of appliances, wherein said power line carrier communication interface facilitates transmitting the service commands to the plurality of appliances and receiving appliance diagnostic results on a power line carrier communication system, and said diagnostic interface implemented within a single device including said display, said processing circuitry generating the service commands to service

~~the~~ at least one appliance of said plurality of appliances, and said power line communication interface configured to modulate data to communicate the data over an alternating current (AC) power line, wherein said diagnostic interface configured to service the at least one appliance via said power line carrier communication interface by at least one of adjusting a characteristic of at least one appliance and displaying to a technician the appliance diagnostic results.

13. (previously presented) The diagnostic interface of claim 12 further comprising an appliance bus interface for communicating with the at least one appliance.

14. (original) The diagnostic interface of claim 12 further comprising a remote service center interface.

15. (original) The diagnostic interface of claim 14 wherein the diagnostic interface gathers appliance statistics to send to a remote service center over the remote service center interface.

16. (original) The diagnostic interface of claim 12 further comprising a user interface to facilitate service diagnostics.

17. (previously presented) The diagnostic interface of claim 12 wherein the at least one appliance comprises a refrigerator.

18. (previously presented) The diagnostic interface of claim 12 wherein the at least one appliance comprises an oven.

19. (previously presented) The diagnostic interface of claim 12 wherein the at least one appliance comprises a heating system.

20. (previously presented) The diagnostic interface of claim 12 wherein the at least one appliance comprises a cooling system.

21. (previously presented) The diagnostic interface of claim 12 wherein the at least one appliance comprises a lighting system.

22. (currently amended) A diagnostic system for providing access to service diagnostics on an appliance, the system comprising:

~~a local-area-appliance-network configured to interconnect~~ a plurality of appliances;

a diagnostic interface configured to be directly connected to said ~~local-area-appliance-network~~ plurality of appliances, said diagnostic interface comprising a display, wherein said diagnostic interface facilitates accepting service diagnostics commands destined for at least one appliance of said plurality of appliances, said diagnostic interface implemented within a single device including a display device, a microprocessor configured to generate the diagnostics commands, and a power line carrier modem configured to modulate data to communicate the data over an alternating current (AC) power line, wherein said diagnostic interface configured to service the plurality of appliances via said power line carrier modem by at least one of adjusting a characteristic of at least one appliance and displaying to a technician the diagnostics commands; and

a dedicated appliance controller for receiving and executing the diagnostics commands.

23. (canceled)

24. (original) The system of claim 22 wherein the diagnostic interface comprises a computer.

25. (currently amended) The system of claim 22 wherein the ~~diagnostics~~ diagnostic interface comprises a PC card interface and an appliance bus interface.

26. (currently amended) The system of claim 22 further comprising a communications interface between the ~~local-area-appliance-network~~ diagnostic interface and the dedicated appliance controller.

27. (original) The system of claim 22 further comprising a remote system, the remote system connectable to the diagnostic interface via an Internet connection.

28. (previously presented) The system of claim 22 wherein the dedicated appliance controller is contained within the at least one appliance.

29. (previously presented) The system of claim 22 wherein the power line carrier modem allows the diagnostic interface to communicate with at least one appliance via a power line carrier system.

30. (currently amended) The method of claim 1 wherein said adjusting the characteristic comprises changing, by the diagnostic interface, the characteristic of a home appliance via the power line carrier ~~modem~~.

31. (currently amended) The method of claim 1 further comprising translating, by the power line carrier ~~modem~~, between an appliance protocol of the at least one appliance and a power line carrier protocol.

32. (canceled)